

**American Library Association Midwinter Meeting
Library of Congress Update
January 17, 2006**

Service units and divisions/offices within the Library submitted the information in this update.

LC EXHIBIT BOOTH

The Library's exhibit booth is no. 469 in the Henry B. Gonzalez Convention Center in San Antonio. The exhibit booth coordinator is Robert Handloff. Exhibit hours are:

Friday, January 20, 5:30-7:30 pm
Saturday-Sunday, January 21-21, 9:00 am-5:00 pm
Monday, June 23, 9:00 am-2:00 pm

U.S. COPYRIGHT OFFICE

Section 108 Study Group

The Section 108 Study Group, convened under the aegis of the National Digital Information Infrastructure and Preservation Program (NDIIPP) and co-sponsored by the U.S. Copyright Office, began its work this spring. The goal of the group, named after the section of the U.S. Copyright Act that provides limited exceptions for libraries and archives, is to prepare findings and make recommendations to the Librarian of Congress by mid-2006 for possible alterations to the law that reflect current technologies. This effort will seek to strike the appropriate balance between copyright holders and libraries and archives in a manner that best serves the public interest.

The creation of the study group was prompted in part by the increasing use of digital media. Digital technologies are radically transforming how copyrighted works are created and disseminated, and also how libraries and archives preserve and make those works available. Cultural heritage institutions, in carrying forward their missions, have begun to acquire and incorporate large quantities of "born digital" works into their holdings to ensure the continuing availability of those works to future generations.

Section 108 of the Copyright Act permits libraries and archives to make certain uses of copyrighted materials in order to serve the public and ensure the availability of works over time. Among other things, section 108 provides limited exceptions for libraries and archives to make copies in specified instances for preservation, replacement and patron access. These provisions were drafted with analog materials in mind, and, as has been observed, do not adequately address many of the issues unique to digital media, either from the perspective of rights owners or libraries and archives. The Section 108 Study Group will review and document how section 108 should be revised in light of the changes wrought by digital technologies, while maintaining balance between the interests of rights holders and library and archive patrons.

The Section 108 Study Group is made up of copyright experts from various fields, including law, publishing, libraries, archives, film, music, software and photography, and it is co-chaired by Laura Gasaway, director of the law library and professor of law at the University of North Carolina, and Richard Rudick, former vice president and general counsel of John Wiley and Sons. (See <http://www.loc.gov/section108/>)

Orphan Works Study

In January 2005, the Copyright Office announced the beginning of its study of issues surrounding "orphan works" – copyrighted works whose owners are difficult or even impossible to identify and locate. The study is a response to concerns that uncertainty surrounding ownership of these works might needlessly discourage subsequent creators and users from using works in socially productive ways, such as by incorporating these works in new creative efforts, or by making them available to the public. The study seeks to address these concerns by soliciting public comment on the issue in order to determine whether a legislative, regulatory, or other solution might be appropriate.

The study was conducted in three phases. The first phase involved the solicitation of written comments from the public. The January 26th Notice of Inquiry published in the Federal Register invited the public to submit written comments during an initial 60-day period. The Office received approximately 700 unique comments before the deadline on March 25, 2005.

After this initial period expired, the Notice of Inquiry also provided for a 45-day period during which the public was invited to submit reply comments addressing issues raised by the initial comments. The Office received about 150 unique comments before this period concluded on May 9, 2005. Both the initial comments and the reply comments have been posted on the Copyright Office's Website.

The next phase involved the review and evaluation of the written comments. After some review, the Office held roundtable meetings with dozens of interested parties in summer 2005 in both Washington, D.C., and Berkeley, California, as part of an effort to produce a report and recommendations on orphan works in January 2006.

The study has the support of several members of Congress who are frequently engaged in copyright issues. On January 5, 2005, Senators Orrin Hatch and Patrick Leahy, the chairman and ranking member,

respectively, of the Senate Judiciary Committee's Subcommittee on Intellectual Property, asked the Register of Copyrights to study this issue and to report findings by the end of the year. In the same month, Reps. Lamar Smith and Howard Berman, the chairman and ranking member, respectively, of the House Judiciary Committee's Subcommittee on Courts, the Internet and Intellectual Property, sent letters to the Register supporting the study.

Pre-registration

The Copyright Office has implemented a directive from Congress to devise a system to allow for pre-registration of unpublished works in advance of commercial release, to help pre-empt infringement. The directive was included in the Artists' Rights and Theft Prevention Act enacted April 27, 2005 [P.L. 109-9]. Pre-registration is now available through an on-line submission process. The Copyright Office delayed slightly the implementation of the pre-registration process to ensure that the online forms were compatible with browsers that may be used by most applicants. Currently, the process is available using Internet Explorer 5.01, 5.5 and 6.0, Netscape 7.02 and Firefox 1.0. Working with the vendor, the software is undergoing upgrades, to be launched early next year, to further expand the browsers that can be used to access the forms.

OFFICE OF THE LIBRARIAN

VSIP/VERA (Buyout/early-out)

This year, the Congressional oversight committees approved the Library's request to offer Voluntary Separation Incentive Program buyouts and/or Voluntary Early Retirement Authority retirements from targeted positions and functions in three service units: Congressional Research Service (up to 50 buyouts), Library Services (up to 175 division-wide, plus all eligible employees in the Motion Picture, Broadcasting, and Recorded Sound Division), and Integrated Support Services (up to 9 buyouts). In order to assure that the VSIP/VERA program will be cost-neutral to the Library, employees electing the buyout had to retire by January 3, 2006. The savings from unpaid salaries from January 3 through September 30 will offset the cost of the incentive payments. Employees had to submit buyout requests by Friday, December 2, 2005. As of that time, the number of VSIP/VERA retirement applications was: Library Services – 174; CRS – 31; ISS–7; total for the Library – 212.

WORLD DIGITAL LIBRARY

Librarian of Congress James H. Billington and Google Co-Founder Sergey Brin announced on November 22, 2005, that Google would contribute \$3 million to the Library's initiative to begin a World Digital Library (WDL) for use by other libraries around the globe. The effort would be supported by funds from nonexclusive, public and private partnerships, of which Google is the first.

The concept for the WDL came from a speech that the Librarian delivered to the newly established U.S. National Commission for UNESCO on June 6, 2005, at Georgetown University.

To lay the groundwork for the WDL, the Library will develop a plan for identifying technology issues related to digitization and organization of WDL collections. The content of the World Digital Library, like that of American Memory, will be primarily one-of-a-kind materials, including manuscript and multimedia materials of the particular culture.

Dr. Billington named John Van Oudenaren, chief of the European Division and head of the *Global Gateway* digital library project, as the Library's senior advisor for the WDL initiative, effective December 19.

LIBRARY SERVICES

Deanna Marcum, associate librarian for Library Services, issued the first Library Services E-Newsletter in November 2005 to keep members of the Association of Research Libraries, the Urban Libraries Council, and the Council of State Library Agencies informed of the service unit's projects and initiatives.

ACQUISITIONS AND BIBLIOGRAPHIC ACCESS DIRECTORATE (ABA)

ABA lost 78 staff to the VSIP/VERA opportunity, by the January 3, 2006 departure date.

Acquisitions and Cataloging in Overseas Offices

Lygia Ballantyne retired from the Library on January 3. She was director of the Library's office in New Delhi, India, and served during the past sixteen months as acting chief of the African/Asian Acquisitions and Overseas Operations Division (AFAOVOP). James Gentner, director of the Cairo Office (Egypt), will serve as acting division chief of AFAOVOP for four months beginning no later than March. Carol Mitchell, currently acting director of the Islamabad Office (Pakistan), has agreed to serve concurrently as

the acting director for the Cairo Office during this interval.

The Library's overseas offices (in Rio de Janeiro, Brazil; Cairo, Egypt; New Delhi, India; Jakarta, Indonesia; Nairobi, Kenya; Islamabad, Pakistan; and the sub-office in Bangkok, Thailand), administered in AFAOVOP, acquire and catalog materials from countries in which the book trade is not well developed; provide preservation controls such as binding and microfilming for many materials they acquired; and conduct the Cooperative Acquisitions Program (CAP) to enable other libraries to acquire materials for their own collections on a cost-recovery basis. The overseas offices made major progress this year toward full integration with the Library's acquisitions and bibliographic access processes in Washington. After intensive training in Washington in the ILS cataloging module for all types of material including electronic resources, microforms, and maps, all offices are able to catalog independently in the ILS.

In April, the directors of the six offices and their financial analysts were trained in use of the ILS acquisitions module and Momentum, the Library's online financial system, as part of the 2005 Field Directors Conference in Washington. This conference also covered the Library's collection policy and digital initiatives, with the goal of involving the overseas offices more closely in the development of digital content. An outgrowth of the April conference was recognition of the need for a new Cooperative Acquisitions Program (CAP) automated system that would meet auditors' requirements regarding the CAP revolving fund and clients' increased expectations for service. At year's end, CAPS-AD (Cooperative Acquisitions Program system-Alternative Development) was under development by the Technology Policy Directorate. The alternative system would make use of the information technology expertise and superior knowledge of the business model residing in each office.

Casalini Shelf-Ready Project

The Library's project to acquire shelf-ready materials, with complete cataloging and some book preparation, from its Italian book vendor, Casalini libri, moved into the production phase in October 2005. The project began in 2004 and proceeded in three phases. The first two phases involved the contribution of 2,200 Casalini-produced bibliographic records, with associated authority work for the final 400, in compensation for intensive training, review, and feedback to Casalini by Library of Congress experts. In 2006, the Library expects to obtain up to 3,500 core-level bibliographic records from Casalini, which has joined NACO and SACO, the name and subject authority components of the Program for Cooperative Cataloging, and will contribute necessary authority work to support access points on these records to OCLC. Serials, volumes added to multivolume sets, belles lettres, and certain other materials are excluded from the project; the Library will continue to catalog at least half its Italian materials in-house during this phase. A Library of Congress bibliographic record that was prepared by Casalini carries an 040 field with values: \$a ItFiC \$c ItFiC \$d DLC.

Duplicate Materials Exchange Program (DMEP)

An outgrowth of a business process improvement project initiated in 2002, DMEP had as its goals to maintain or improve equitable exchanges with active partners; reduce ABA staff time needed to manage exchange programs; reduce space used to store duplicates, list materials, and pack items; reduce expense by reducing the number of times that items were physically handled; and implement a Web-based customer interface to replace paper lists. All goals have now been achieved, and the Library's exchanges with partners around the globe are centrally serviced through DMEP. The online interface for the program, Web DMEP, was launched at the end of July 2005 to 3,063 partners in 118 countries. The site employed shopping cart functionality to allow the Library's exchange partners to select desired materials in exchange for materials that they send to the Library. Web DMEP offered instantaneous selection, inventory control, partner access to an entire database of available titles in all subject areas; and many other improvements over the traditional process of distributing printed lists of available materials. For exchange partners without Web access, the program continued to distribute printed lists containing a different, but comparable, selection of books. In fiscal 2005, the Library sent its exchange partners 11,197 books requested from printed DMEP exchange lists and 4,574 books requested from Web DMEP.

Bibliographic Enrichment Activities

John Celli, Chief of the Cataloging in Publication (CIP) Division, became chair of the Bibliographic Enrichment Advisory Team upon the retirement of founding chair John Byrum on January 3, 2006. John Celli and cataloging automation specialist David Williamson will coordinate and manage BEAT projects. Patricia Hayward, program specialist in the CIP Division, will assist with administrative and other support. For more information, please see <<http://www.loc.gov/catdir/beat>>

Automated Web Cataloging with the Web Cataloging Assistant. An outgrowth of BEAT's Web Access to Publications in Series project (see below), Web Cataloging Assistant has been in operation since June of 2004. It is currently being used to catalog monographs from 32 different series. As of November 30, 2005, it has accounted for nearly 4,000 electronic monographs cataloged. This project allows a cataloger to examine the abstract page for a particular monograph on the Web, and by using computer and programmed

functions effect the creation of a MARC record that is automatically added to the LC database. This record includes an abstract of the title represented. The cataloger subsequently adds subject headings and performs any needed authority work. The capability greatly reduces manual aspects of the project and allows catalogers to concentrate on the intellectual work, thus providing an enriched record through largely automated means.

Web Access To Publications in Series. This project has several facets, the first of which is to link many "working paper/discussion paper" type serial publications to their Web-based electronic versions. These links provide access to electronic versions of these publications. With this project LC provides more timely, comprehensive, and cost effective access to these series. In a second area of activity the Library's Serial Record Division is creating electronic serial records for a number of high research value monographic series that have not been represented in LC's catalogs, thereby opening up a rich, new source of information for researchers who may now access electronic versions of those items. These efforts have provided access to the full electronic texts of 30,000 individual monographs. In all, Web Access to Publications in Series currently has links to more than 350 series. A noteworthy enhancement to both the project and for Business Reference Services, Science, Technology and Business Division, has been the creation of a Web-accessible database of *Technical Reports and Working Papers in Business and Economics* for series covered by the project. The database can be accessed at <<http://www.loc.gov/rr/business/techreps/techrepshome.php>>

Machine Generated 505 Table of Contents (MG 505). This BEAT project adds full text table of contents (TOC) data to catalog records – information that was previously available only through links from within catalog records to LC's Web-based TOCs for those items. In addition to English language materials, the project has recently expanded to include items in German.

The original TOC data was generated from information captured from the scanned table of contents images from books and is now being added to field 505 by computer programs. Fields with such information are preceded by the legend: "Machine generated contents note:" and are not reviewed for punctuation. Because the scanned table of contents reflect a wide variety of formats and structures, a small percentage of records may contain errors in the placement and configuration of the 505 texts. Begun in February 2005, this project has produced 10,000 machine generated TOC.

Web Access to Works in the Public Domain. This BEAT initiative links LC bibliographic records to full text electronic copies of the materials residing in other institutions. The Library expects to provide users with substantive information about these materials as well as access to their full texts. In 2005, BEAT processed items from new sources: RAND Corporation, the U.S. Commission on Civil Rights, the University of Maryland Law School, and the University of Wisconsin Digital Collections.

BEAT Book Reviews projects. This ongoing BEAT project to include links to scholarly reviews expanded in fiscal 2005 to include reviews from *E-Streams* and *Education Reviews*.

Collaborative project to study iVia software. The Library has a cooperative agreement in the final stages with the INFOMINE Project (<<http://infomine.ucr.edu>>) at the University of California, Riverside. This cooperative agreement would test the iVia software (<<http://infomine.ucr.edu/iVia/>>) developed for the INFOMINE project. iVia harvests, analyzes, and processes metadata from Websites and other digital objects for use in the INFOMINE database. The parties believe that it would benefit the library community worldwide to incorporate the Library's subject authority and classification data into the iVia automatic classifier capability. It is thought that the incorporation of this data will improve the ability of the iVia software to generate metadata useful to the Library and other libraries, with minimal intervention by cataloging staff. The cooperative agreement was pending as of December 30.

Digital Tables of Contents. The Digital Tables of Contents project creates machine-readable Table of Contents (TOC) data from TOC surrogates and these materials are subsequently HTML-encoded and placed on a server at the Library. The process cross-links the TOC to underlying catalog records. Both the catalog records and the linked TOC data may be viewed through a Web browser by accessing the Library's online catalog access options. Over 32,000 TOCs have been created and linked in this project. In 2005, over 6000 TOCs have been added to the project. In addition, more than 8.8 million hits have been recorded on the TOC files section of BEAT Web pages for the three Web-based TOC projects combined.

Cataloging in Publication

In early spring 2006, the Library of Congress Cataloging in Publication (CIP) Program will launch two separate online surveys to U.S. libraries and U.S. publishers. The year 2006 marks the 35th anniversary of the CIP program, an appropriate time to review the status of the program and to obtain feedback from the communities it serves.

The surveys are designed to obtain input on a number of critical issues facing the CIP program and its future. They will help the Library of Congress identify the full scope of how CIP data is currently used and how the program can be improved, so that it can better meet the needs of the library and publishing

communities, while improving throughput, efficiency and reducing costs.

The surveys will be posted on the Library of Congress homepage and notice of their availability will be advertized through the American Library Association and the Association of American Publishers.

For further information about the 2006 CIP surveys, please contact Oxana Horodecka, Coordinator of Electronic Programs, CIP Division, Library of Congress: ohor@loc.gov

Cataloging Distribution Service (CDS)

Cataloger's Desktop. Migration to the Web of *Cataloger's Desktop* is now complete. The Cataloging Distribution Service (CDS) will shortly introduce a simplified user interface and a reorganized and easier-to-use table of contents. We will demo *Desktop* new features as well as Quick Tip navigational aides in the LC booth theater as well as throughout the conference at the LC exhibit booth.

Classification Web. CDS will also demonstrate *Classification Web*, its fee-based service offering Web access to *LC Classification* schedules and *LC Subject Headings* plus Dewey correlations to LCSH. Since CDS released the product, it has been an outstanding success, with more than 1,700 subscribers around the world. A demonstration of *Classification Web: New Features* will take place in the booth theater.

Free PDF versions of selected publications. The following publications will be available as free PDF files beginning with issues published after January 1, 2006: *Cataloging Service Bulletin*, *Updates to Library of Congress Rule Interpretations*, *Updates to Subject Cataloging Manual: Subject Headings*, *Updates to CONSER Editing Guide*, *Updates to CONSER Cataloging Manual*, and *Updates to MARC 21 format* documentation. The traditional paper publications will continue to be available from CDS by paid subscription. Based on CDS's experiences offering PDF versions of these selected publications throughout 2006, CDS may decide to offer additional titles in PDF format.

Cataloging Documentation Survey. CDS conducted a cataloging documentation survey this past summer. The survey was available directly from the CDS Web page. Among the major findings were the following: there was some interest in PDF versions of updates to CDS's looseleaf publications [see section directly above this for details], but, generally, PDF was not a preferred format for LC documentation users.

Classification Web was the preferred format for accessing *Library of Congress Subject Headings*; *Cataloger's Desktop* was the preferred format for accessing LC's cataloging documentation. Forty percent of respondents used the paper print versions of documentation to supplement their use of the Web products.

Training products. During 2006, four new courses and their accompanying CDS materials will be introduced: *Metadata Standards and Applications*; *Principles of Controlled Vocabulary and Thesaurus Design*; *Digital Project Management for the 21st Century*; and *Digital Library Design Overview*. During the last year, the following training courses and accompanying CDS materials were revised: *Integrating Resources Cataloging Workshop*; *Basic Serials Cataloging Workshop*; and *Advanced Serials Cataloging Workshop*. A new course and accompanying CDS material, *Basic Creation of Name and Title Authorities*, was introduced.

New Voyager Unicode Implementation and Delete Records. The new Voyager Unicode implementation had to be completely tested before CDS made the switch. Ninety percent of the affected programs are now functioning without problems. One exception relates to the distribution of delete records. There is a problem with the delete processing when certain diacritics are present. CDS is aware of the problem and has identified the records. Subscribers need not report the missing records. CDS hope to resolve the issue soon and will redistribute the missing delete records.

A positive result of the new Voyager Unicode system is that CDS is now in a position to distribute UTF-8 encoded records. For the near future, UTF-8 distribution will be in response to requests from subscribers.

CDS transition. Kathryn Mendenhall, chief of CDS, became full-time acting director of the Partnerships and Outreach Programs Directorate in November 2005. Barbara Tillett, chief of CPSO, is also acting chief of CDS during Mendenhall's absence. She is assisted by Tom Yee, assistant chief of CPSO. In addition, Loche McLean and Bruce Johnson will rotate as acting assistant chiefs of CDS, with McLean taking on that role for the first quarter of the calendar year.

Cataloging Policy

Descriptive cataloging. The Cataloging Policy and Support Office (CPSO) continues to move forward with its mandate to revise its documentation. The following LCRI's have been modified, cancelled or simplified:

LCRI 1.0G1, Accents and Other Diacritical Marks. This LCRI prohibited the use of accent marks on initial capital letters of words in manifestations published after 1801 in French, Spanish and Portuguese. At that time of issuance in 1982, this policy aligned with the practices of the Library and Archives, Canada (LAC);

however, since that time LAC has changed its practice and asked the Library of Congress to conform with that change. Effective January 1, 2006, CPSO is cancelling this LCRI and will reissue the LCRI with guidelines for implementation. This LCRI will be available February 1 via Cataloger's Desktop. Catalogers may begin to implement this decision immediately. Cf. <<http://www.loc.gov/catdir/cpso/accents.html>>

LCRI 22.17, Dates. In late June 2005, CPSO posted a proposal for the addition of dates to existing personal name headings, and solicited comments from the wider cataloging community. This proposal stimulated a tremendous response and interesting discussions. A complete summary of the comments received, and a discussion of the resulting decisions made by Library of Congress cataloging management is available at <<http://www.loc.gov/catdir/cpso/deathdates.pdf>> [140 KB; 14 p.]. In brief, these decisions are: Allow the optional addition of death dates to established headings that contain birth dates only. Continue the "status quo" regarding the restriction of adding dates (birth and/or death) to existing headings that previously had no dates and are not in conflict with other headings. Additional simplification and implementation issues are addressed in the full report. A draft of LCRI 22.17 incorporating these decisions is available at <<http://www.loc.gov/catdir/cpso/22-17-rev05.pdf>> [19 KB; 2 p.]. The final version will be available via *Cataloger's Desktop* on February 1, 2006. Because of the expected impact and in the interest of an orderly implementation, LC requests that the new policies not be followed until the LCRI is published.

LCRI 25.13. Manuscripts and Manuscript Groups draft available for comment. Because this complex rule is used infrequently by most catalogers, the lack of explicit guidelines has caused considerable frustration and disparate results. The revisions are designed to give clear instructions so that catalogers will 1) know exactly how to create a heading for a manuscript and provide appropriate references, even though they only occasionally create these headings, 2) achieve consistency in creating manuscript headings, 3) provide specific instructions for relating a manuscript heading to the heading for the work contained in the manuscript, and 4) limit the creation of an authority record for the work to situations in which it is actually needed. The draft is available at <http://www.loc.gov/catdir/cpso/25_13.html>. The deadline for comment on this draft is January 30, 2006. Comments may be sent to CPSO by email at <cpso@loc.gov>.

Descriptive Cataloging Manual, Z1. The 670 section has been updated to include guidelines for the use of subfield \$u that allows catalogers to add a Uniform Resource Identifier (URI) in authority records when needed. Appendix 1: Ambiguous headings has been updated to reflect recent policy changes in regard to Forests, parks, and reserves as well as to the appropriate MARC coding for U.S. tribal entities. Appendix 2: Canadian Names clarifies that the Library and Archives, Canada will maintain the status quo in regard to Canadian forests, parks, and reserves as well as to names of Canadian First Nations.

LC Guidelines supplement to the MARC 21 Format for Authority Data (i.e., "Blue pages") has been updated to reflect the use of subfield \$u in the 670 field and guidelines for the use of 043 in authority records have been issued.

LC Unicode cataloging policies. CPSO will be working on adjustments to the cataloging policies related to bibliographic and authority records using non-roman scripts over this coming year. Currently, LC is planning to hold changes until 2007 to allow time for testing and coordination with the NACO nodes; discussions have already started.

LCSH, 28th edition. The 2006, 28th edition of LCSH will include approved subject headings and changes up to and including Weekly List 35 for the editorial meeting that met on August 31, 2005.

Library of Congress Classification. The 2005 printed editions of class H (Social sciences), K (Law in general. Comparative and uniform law. Jurisprudence), KF (Law of the United States), K Tables (Form division tables for law), L (Education), P-PA (Philology and linguistics), and PJ-PK (Oriental philology and literature, Indo-Iranian philology and literature) were published by the Cataloging Distribution Service (CDS) of the Library of Congress.

Subject Cataloging Manual: Shelflisting. The Cataloging Policy and Support Office is planning to produce a new edition of the current *Subject Cataloging Manual: Shelflisting*, combined into a single physical volume with the current *Subject Cataloging Manual: Classification*. In the meantime, much of the new and revised material in the shelflisting manual is being made available in *Cataloger's Desktop*. The manual has been reorganized into two sections: *General*, and *LC-Specific Information*. Many of the instruction sheets have been renumbered and relocated. G 60 has been split into five separate instruction sheets. Fourteen instruction sheets have been deleted because they reflect internal LC procedures that have changed since the introduction of the LC ILS in 1999. Some of the remaining instruction sheets have been updated to correct errors or remove obsolete information. Additional updates and corrections will appear in *Cataloger's Desktop*, Issue 1, 2006.

Cooperative Cataloging

Highlights from the Program for Cooperative Cataloging statistics for fiscal include:

new name authority records: 162,099

new series authority records: 9,889

new subject authority records: 2,962

new bibliographic records: 66,809

CONSER authentications: 23,692

CONSER maintenance: 32,246

Growth in membership has continued at an even pace, with the PCC reaching the 500 member mark during the fiscal year. A large number of training sessions for new and current members were conducted over the past year—64 institutions and over 100 catalogers received NACO training; the majority of these sessions were done by non-LC staff. Outreach efforts in under-represented areas such as East Asian, African-American, and other minority groups had notable successes with the training of the Harvard Yenching Library for BIBCO (monograph bibliographic record cooperative program), the NACO (name authority cooperative program) membership of the National Indian Law Library, and the formation and training of a Caribbean NACO and SACO (subject authority cooperative program) funnel centered in the University of the West Indies.

A further notable development is the consolidation of SACO as a program with membership, training, and quality/quantity requirements. Experienced catalogers have agreed to serve as SACO mentors in the field, working with new members. This will spread the training and review expertise outside the LC staff.

CONSER

Auto-Derived Records and CONSER Authentication. In October 2005 CONSER members discussed a joint OCLC/LC/PCC proposal to include in the CONSER database records created as a part of the OCLC e-serials holdings project. The records were created using a macro to clone e-serial records from existing CONSER and non-CONSER OCLC records for the print resources. One of the issues surrounding the cloned records is the possibility that some incorrect ISSN data on the records for the print resources will transfer to cloned e-serial records. Resolving duplicate records created during the project is also a concern. The proposal will be a topic at the CONSER-At-Large meeting on Sunday at the 2006 ALA Midwinter meeting.

Access Level Record for Serials. The Library of Congress Serial Record Division and several PCC members have formed a group to develop and test an access level record for serials. This collaborative pilot project is co-chaired by Regina Reynolds (LC) and Diane Boehr of the National Library of Medicine. Several CONSER members are participating in the project and a discussion will be presented at the CONSER-At-Large meeting at Midwinter.

The access level record pilot for serials takes advantage of the model used for non-serial e-resources developed by Dave Reser (LC), LC contractor Tom Delsey, LC cataloging staff, and LC reference staff. The effort is designed to enhance the utility of catalog records, both to end users and those in the library that use catalog records for processing serials, by assuring that essential elements for user tasks are present in the record. Cataloging cost savings may result by supplying only those record elements that are essential for performing the user tasks identified in *Functional Requirements for Bibliographic Records (FRBR)*: find, identify, select, and obtain.

The serials pilot will include creation of test records based on the essential set of AACR2 and MARC 21 elements and the cataloging guidelines. The records will be evaluated in terms of cataloging costs and how well the records meet end user and library processing needs. The project is expected to result in a chart of essential data elements and an outline of cataloging guidelines by January 2006. A progress report, including an evaluation of the pilot, is expected by the end of April 2006. The charge for the pilot including a detailed discussion of background, methodology, and deliverables is available at <http://www.loc.gov/acq/conser/Access-level-charge-lc-pccaug17.pdf>

Serials Cataloging Cooperative Training Program (SCCTP). In fiscal 2005, trainers in the SCCTP taught 64 workshops, sponsored by more than twenty different organizations. Sponsors included utility network training programs, library associations, library interest groups, consortia, and university libraries. The SCCTP workshops continue to enjoy strong demand and serve as a practical source of serials cataloging training in the serials community.

During the year, SCCTP joined other cooperative training initiatives under the umbrella of the Cataloger's Learning Workshop (CLW) <<http://www.loc.gov/catworkshop/>>. CLW is a clearinghouse portal for cataloging and other metadata training resources for information workers. The CLW editorial board provides editorial oversight of material produced by the participating programs: SCCTP, Cooperative Cataloging Training, and Cataloging for the 21st Century. CLW is developing guidelines to provide more consistency in training materials created and distributed by component programs and hopes to enhance communication among course developers, revisers, CDS as distributor, and instructors.

Catalogers and course developers have expressed interest in developing Web-based courses from existing SCCTP workshop material. Development of pilot instructor led online workshops is being considered for development in 2006.

CONSER Documentation. The SCCTP *Integrating Resources*, *Basic Serials*, *Advanced Serials*, and *Electronic Serials* workshops were revised in 2005 to reflect changes in the 2004 Update to AACR2 and included other changes and corrections. The *CONSER Cataloging Manual (CCM)* update 2 was distributed in spring of 2005 and the *CONSER Editing Guide (CEG)* update 16 was completed in December 2005 and will be distributed in early 2006.

Library of Congress Website Focus Group

The Acquisitions and Bibliographic Access division at the Library of Congress plans to redesign its Website at <<http://www.loc.gov/catdir/>>. The Library of Congress will conduct focus groups at ALA in San Antonio to learn more about the needs of our Website users. We will focus on the needs of catalogers and other individuals who use the Library's cataloging and related resources.

There will be six 30-minute focus group sessions. Participants were asked to register before January 10, 2006. Please send questions to: Michelle Rago, Office of Strategic Initiatives, Library of Congress, <mrage@loc.gov>

Bibliographic Access Divisions and Serial Record Division Production, Fiscal Years 2005 and 2004

<i>Bibliographic Records Completed</i>	FY2005	FY2004
Full/Core Original	185,531	185,309
Collection-level cataloging (CLC)	4,441	4,393
Copy cataloging	55,925	46,363
Minimal level cataloging	<u>28,993</u>	<u>23,872</u>
Total records completed	277,453	259,937
 <i>Total Volumes Cataloged</i>	 312,818	 294,510
 <i>Items Processed on Inventory-Level Records</i>	 -0--	 24,392
 <i>Authority Records Created or Updated</i>		
New name authority records	88,828	92,311
New series authority records	9,056	8,770
New Library of Congress Subject Headings	<u>6,678</u>	<u>6,393</u>
Total records created	104,562	107,474

COLLECTIONS AND SERVICES DIRECTORATE

Federal Research Division

In response to a request from ALA for use in a library disaster recovery workshop, FRD has mounted on its public Website a May 2001 report prepared under an Interagency Agreement with FEMA entitled "Cost Estimates for the Replacement of Periodical Holdings." The report relates to the cost of replacing specific periodical titles lost in a flood at North Dakota State University in 2000. The URL is <http://www.loc.gov/rr/frd/pdf-files/FEMA.pdf>.

Motion Picture, Broadcasting, and Recorded Sound Division

National AudioVisual Conservation Center. In December 2005, the Library took possession of Phase 1 of the new National AudioVisual Conservation Center (NAVCC) in Culpeper, Virginia. Phase 1 is comprised of the 140,000 square foot Collections Building and the Central plant servicing the entire facility. Staff will begin working on-site in early January to prepare for the massive task of moving the Library's moving image and recorded sound collection throughout the winter and spring months. The Packard Humanities Institute continues to construct Phase 2 of the facility – comprised of the Conservation Building and Nitrate vaults – which is now scheduled for completion and final turnover to the Library at the end of 2006. At that time, the Library's audiovisual preservation laboratories and the staff in the Motion Picture, Broadcasting and Recorded Sound Division will be relocated to Culpeper.

Through contracts with Ascent Media Group and a team of software developers, progress continued on the design of the NAVCC audiovisual system and software requirements necessary to automate and integrate the center's new workflows. In January 2006, the Library's Information Technology Services (ITS) department distributed a Request for Proposal to procure the new computer server and storage infrastructure that will be used as a preservation archive to sustain and protect the petabyte-level preservation data produced by the NAVCC. The deadline for proposals in response to the RFP is March 15, 2006.

National Preservation Boards. In consultation with the Library's National Recording Preservation Board, work continued on the effort to conduct a study of the state of recorded sound preservation in the U.S. As part of the study, the Library produced two new publications in collaboration with the Council of Library and Information Resources (CLIR). The first, *Survey of Reissues of U.S. Recordings* by Tim Brooks, was published in August 2005. The purpose of this report is to determine the legal accessibility of sound recordings published in the United States during the period between 1890 and 1965. Utilizing

scientific research methods, the report discovered that only about 14 percent of recordings published during this period are still in print today. The second study, published in December, was entitled *Copyright Issues Relevant to Digital Preservation and Dissemination of Pre-1972 Commercial Sound Recordings by Libraries and Archives*. This study, written by Columbia University Law Professor June Besek, provides a legal analysis of the complex rights issues involved in sound recordings prior to their being brought under federal copyright protection in 1972, with a focus on the scope of protection and allowable uses, particularly for research and scholarship.

In December, the Librarian of Congress announced the 17th annual selection of 25 films named to the National Film Registry. Selected following the receipt of public nominations and in consultation with the Library's National Film Preservation Board, the total number of titles on the registry now stands at 425. Titles named in 2005 were: *Baby Face* (1933), *The Buffalo Creek Flood: An Act of Man* (1975), *The Cameraman* (1928), *Commandment Keeper Church, Beaufort South Carolina, May 1940* (1940), *Cool Hand Luke* (1967), *Fast Times at Ridgemont High* (1982), *The French Connection* (1971), *Giant* (1956), *H2O* (1929), *Hands Up* (1926), *Hoop Dreams* (1994), *House of Usher* (1960), *Imitation of Life* (1934), *Jeffries-Johnson World's Championship Boxing Contest* (1910), *Making of an American* (1920), *Miracle on 34th Street* (1947), *Mom and Dad* (1944), *The Music Man* (1962), *Power of the Press* (1928), *A Raisin in the Sun* (1961), *The Rocky Horror Picture Show* (1975), *San Francisco Earthquake and Fire, April 18, 1906* (1906), *The Sting* (1973), *A Time for Burning* (1966), and *Toy Story* (1995).

PARTNERSHIPS AND OUTREACH PROGRAMS DIRECTORATE

Kathryn Mendenhall, director of the Cataloging Distribution Service, was named interim director of the Partnerships and Outreach Programs Directorate, effective November 1, 2005.

Federal Library and Information Center Committee

Roberta Shaffer was appointed executive director of the Federal Library and Information Centers Committee on August 29. During fiscal 2005, the Federal Library and Information Center Committee (FLICC) pursued its mission to foster excellence in federal library and information services through interagency cooperation and to provide guidance and direction for FEDLINK.

The FLICC Human Resources Working Group contributed to redefining the Office of Personnel Management Qualification Standards for job series 1410 (librarians) as well as the Classification Standards and to removing the librarian occupation from OPM's services directory to have it established as a professional occupation. The Education Working Group presented a variety of seminars and workshops on cataloging, copyright law, digital licensing, and other information science policy issues. The Content Management Working Group sponsored an update session on the future of the federal library and workshops on information architecture, taxonomy and eGovernment.

National Library Service for the Blind and Physically Handicapped (NLSBPH)

In a milestone agreement, NLS arranged for Battelle, a major technology innovation firm, to lead a consortium of expert subcontractors to design and develop its next-generation audiobook system. The complete playback system will include a solid-state digital talking-book machine and a flash-memory cartridge, about the size of a credit card and labeled in both print and braille, that stores the audiobook. It will be lightweight, portable, and durable enough for years of use, largely maintenance-free. NLS has set a reliability goal of ten years of normal daily operation.

PRESERVATION DIRECTORATE

Dianne van der Reyden was permanently appointed director of preservation on September 12.

IFLA PAC Center Initiatives

The Directorate is the Regional Center for North America for the International Federation of Library Associations (IFLA) Preservation and Conservation (PAC) Focal Point, which is hosted by the National Library of France. During the summer of 2005, the Directorate initiated the formation of an IFLA PAC North American Network, consisting of a dozen partners including the libraries of Harvard, Yale, Cornell, Johns Hopkins, the University of Utah, and the University of Texas-Austin, as well as the Smithsonian Institution Library, the National Archives and Records Administration, the New York Public Library and the Library and Archives of Canada. The purpose of this group is to form a network of local regional

centers that can address library preservation issues on a national level. The first charge to the group was to develop a coordinated effort for emergency mitigation for collections. To this end, each partner was asked to agree to commit annually a total of 80 hours of staff time in recovery and training plus \$1000 in resources or the equivalent to help with emergencies in North America or neighboring countries. With the advent of Hurricanes Katrina and Rita, the North American Network (NAN) has held weekly conference calls to coordinate activities with FEMA and the Heritage Preservation Foundation, and a series of recovery workshops have been planned for fiscal 2006.

Emergency Response Accomplishments

To respond to the needs of libraries in areas affected by hurricanes, the Directorate updated its Website to include a link for Hurricane Recovery, Emergency Preparedness and Response, containing information for libraries, archives, museums, and the general public about recovery of water-damaged materials. An in-house training program was designed and scheduled for hurricane-affected library staff wanting to learn disaster recovery techniques for collections, with a curriculum specifically on the topic of recovery of water-damaged materials. The Directorate also identified volunteers and supplies that may be available to aid afflicted libraries.

Mellon Photograph Survey Grant

The Andrew W. Mellon Foundation awarded a \$40,000 grant to the Directorate for a three-pronged project: a comprehensive survey of the Library's photograph collections, an evaluation of a database structure to use as an assessment tool related to the conservation of those collections, and recommendations to address the needs identified in the survey. The comprehensive survey of the Library's approximately 14 million photographs will allow photo conservators to plan and conduct photo preservation activities more effectively and efficiently than has been possible in the past because of limited staff and resources, and will provide a model for that can be used to survey other photograph collections in large research institutions. The project is expected to take 15 months, continuing through fiscal 2006.

Fellows and Interns Training Program

The Directorate reorganized its Fellows and Interns Training Program to maximum funding options and to introduce students to the full range of preservation activities undertaken in the Directorate. In addition to funds from Pulitzer, Harper-Inglis, and INA, new funders included Nielson-Bainbridge and The Mellon Foundation. The Directorate hosted eight interns from conservation programs in the US, Chile, France, Italy, and Japan.

Digitizing Sound Initiative

Two initiatives continued with the Department of Energy's Lawrence Berkeley National Laboratory. The first, entitled the "Image, Reconstruct, Erase Noise, Etc." (IRENE) Project, funded by the Library and by the National Endowment for the Humanities, is aimed at building a fast two-dimensional scanning machine for lateral discs. A functioning prototype was assembled and scans made with that machine have demonstrated the required performance. Development work on the full scale software package is underway. Analytical studies research effort is centered on the use of a precision surface profiling probe that utilizes confocal microscopy. Various scans and tests have been made on a diversity of media including wax and celluloid cylinders, shellac, lacquer, and aluminum discs, and plastic dictation belts. Audio clips from Edison and wax Dictaphone cylinders, some from the Jack London residence at the Jack London State Park in Glen Ellen, California and heavily damaged by "mold," have been recovered. A number of preliminary conclusions are under consideration which impact on optimal scanning strategies and scan times. This project was presented at the Library in May 2005. The second initiative, entitled "Analytical Studies using Non-Contact Methods on Mechanical Recording Media," is funded by the Library with additional support from the Mellon Foundation. The research effort is aimed at measurements using the full three-dimensional surface profiles of phonograph discs to extract the maximum information from the recorded sound carrier. A paper describing the 3D studies was published in the Journal of the Audio Engineering Society in June 2005. A goal of this effort is to develop an IRENE-like proposal for a 3D scanning system that could be used by the Library. That proposal would be ready in mid-2006. Significant outreach activity has explained this research and its value to a diverse audience including archivists, conservators, scientists, audio professionals, students, and the general public. Approximately 30 invited talks have been presented and a large number of newspaper and magazine articles, and radio and TV spots have appeared.

Preservation of Treasures Program

Work began on a contract with the National Institute of Standards (NIST) for the design and construction of an argon encasement for the display of the WaldseemueLLer Map, based on systems used for the Charters of Freedom.

Conservation Division

Conservation Treatment Section. Staff surveyed 3,744,985 special collection items for treatment, digitization, exhibition, and relocation to off-site storage. To make collections from twelve curatorial divisions available for use, staff treated 57,644 books, paper, photographic and mixed media materials, and housed 786,676 items, including audio/visual materials. Preservation staff also prepared 577 items for exhibitions worldwide and 4188 items for the National Digital Library and Internet access. New initiatives included the preparation of condolence books to be signed by Congress for both the Pope John Paul II and the victims of the London subway bombings, and staff continued to consult on the new Capitol Visitors Center. Highlights included the conservation treatment of several colonial documents including the papers of George Mason, as well as a letter from the Continental Congress to George Washington, the 1787 Articles of Confederation, Benjamin Franklin's 1754 Draft of the Albany Plan of Union, and the Declaration of Rights made by Representatives from Virginia. Ancient and exotic materials were also treated, such as a medieval Ethiopian vellum manuscript story of Saint Takle, the 15th century Washington Haggada, a 16th century Mishnah Torah with wooden boards, the Dhuratul Taj, an illuminated manuscript of Shi'a text, the 17th century Sanson Atlas Nouveau, an 18th century Italian parchment scroll containing the Book of Esther, a 19th century Tibetan thangka painting and a 19th century map of Peru. The Ezoshi Collection of 130 unique and rare volumes about the Ainu people of Japan was fully examined, repaired and rehoused. In addition, a special presentation housing was made for the bronze head and hands of Abraham Lincoln. Treatment continued on the political cartoons from the Herblock and Swann collections.

In the Interpretive Programs Office Conservation Program, Conservation Division staff treated 90 books, 83 single paper items and 69 photos and 1 vase, among other things, for exhibits including the *Kislak Highlights*, *Heavenly Craft*, *Walt Whitman's Leaves of Grass*, *Haven to Home*, *American Treasures*, and Disney's LC to LA exhibition program.

Preventive Conservation Section. Preventive Conservation staff completed the fourth year of a five-year project to preserve 'at-risk' collections on Capitol Hill. To protect such collections from handling, light and pollutants as part of a stabilization initiative, over 13,255 enclosures, folders and boxes were made to house more than 965 books, 5,618 paper items, 6,645 photographs, and 27 objects. Milestones from this initiative include the completion of the following three-year rehousing projects: 130,450 documents from the Theodore Roosevelt Collection, 15,080 photographs from the Margaret Mead collection, 43,969 photographs from the Biographical File Collection, and 2,781 dust jackets protected from the Rare Book and Special Collections Division. Treatment and housing was completed on several photographic collections including Fenton, Flanner-Solono, and Western Survey and on large items from the Popular Graphic Art Collection.

Binding and Collections Care Division

The Library Binding Section implemented two initiatives designed to improve workflow efficiencies that began to reduce persistent binding backlogs. The first project involved analyzing binding quality review workflow to determine where non-staff resources could be applied in order to redirect available staff time to the preparation of more items for commercial binding. The second efficiency initiative involved a pilot project to defer commercial binding of most softbound Copy 2's volumes assigned to the General Collection that are cataloged by the History and Literature Cataloging Division (HLCD). Instead of full commercial binding, these duplicate volumes are being labeled and processed for storage in the more environmentally beneficial Fort Meade storage facility.

An existing contract with Preservation Technologies (PTLP), requiring review and selection of newly bound items for mass deacidification treatment, was modified to include preliminary binding quality review and routine ILS update tasks for all commercially bound volumes. This action resulted in a thirty percent increase in the number of items being prepared for commercial binding on a weekly basis during the last two months of the fiscal year.

The Collections Care Section continued to improve its core activities to provide repair and box making services. In fiscal 2005, 2,954 volumes were repaired and 15,489 boxes were made (an increase of 93 percent over fiscal 2004 levels). Staff contributed to the efforts of the Public Domain Book Scanning project. Contributions included writing selection guidelines, drafting workflow documents, training in

identifying the condition of volumes to be scanned and in their care and handling, and consulting with cooperating partners' staff concerning improvements to scanning equipment. Collaboration with the CALM Division to wrap 1,441 damaged volumes allowed the volumes to quickly return to the decks during a major shifting project.

Staff further collaborated with CALM, BIP and RBSC to develop an initiative to move approximately 100,000 volumes from Landover to Fort Meade. The Section's contributions to the project will include identifying volumes to be transferred to RBSC, and cleaning and rehousing at risk volumes. This project will begin in fiscal year 2006. Staff continued to support the Preventive Conservation and Fort Meade/Culpepper MDEP initiatives by supervising the work of five Collections Care Technicians. Over 30,000 maps from the American Title Map collection were reboxed through the section's management of a contract with History Associates. This project will continue in 2006.

Before the close of the fiscal year, the Collections Care Section acquired a new automated box-making system, the Kasemake. The Section has already begun making use of the machine's enhanced capabilities. A self-closing wrapper is now being made for volumes being sent to Fort Meade. These wrappers are thinner than the previous four-flap box, and therefore use less space within the Fort Meade box while still protecting at risk volumes. Additionally, these boxes do not require any fasteners, which speeds up their production and lowers the cost of creating them. Furthermore, the new machine is being used to cut foam inserts for MRC multimedia boxes and the MBRS Paper Prints boxing project. Previously this had been a time consuming task done by hand using several board shears, a book press and die-cut knife. Now, this task is done with greater precision, and only takes seconds per piece. In short, the system enables staff to efficiently create several hundred box styles using a wider variety of materials including boxboard, foam, cloth and matboard.

Preservation Research and Testing Division

The Preservation Research and Testing Division conducts original research to advance preservation of the Library's collections. From a material science perspective, the Library's collections are composed of traditional, audio/visual and digital objects based on their composition, properties and use. In order to extend the useful life of these objects, research projects investigate material composition and aging properties of collections and the materials used to house them, as well as the deleterious or beneficial effects of environments in which collections are stored and the conservation treatments that collections undergo. The Division has programs that assure quality control of materials and procedures, develop specifications and standards, undertake forensic analysis to identify compositions, characterize effects of natural and accelerated aging on properties, and develop testing and safety protocols.

Quality Control and Assurance Program. To support the preservation of the Library's analog and digital collections, the Division's Quality Assurance Program ensures that collection items in all formats are housed only in the highest quality materials to achieve the maximum usable life expectancy for the item. Materials procured through the Preservation Supply Catalog, and by individual divisions, are required to meet Library of Congress specifications and be subjected to rigorous testing prior to acceptance. One hundred twenty-six items composed of various materials were tested in PRTD, including paper, card, board, book-cloth, plastics, film, and foam. These materials are evaluated based on multiple parameters, constituting a total of 1256 tests accomplished in fiscal 2005.

Specifications Program. To ensure that the Library continues to provide products used for housing its collections that demonstrate the characteristics of the exceptional durability and permanence required for long-term preservation and access, in fiscal 2005 staff initiated a Specification Discussion Group to better serve the needs of our constituents by collaborating with conservators and custodial divisions in the development of new specifications, and updating older ones. In fiscal 2005 the committee highlighted the need to revise the requirements for stiffness and smoothness of card and board stock, as well as the physical requirements for corrugated board products used in pre-made boxes and for the automated box tester in the Binding and Collections Care Division. Experiments are being planned to more precisely correlate the performance requirements established by the Library curators with laboratory testable specifications. The results of this study will be discussed with the Library's suppliers to try to reach a reasonable compromise between preservation needs, commercially available manufacturing processes, and cost.

Forensic Analytical Services Program. To provide scientific and technical support for projects related to the conservation of the Library collections, staff conducted physical and chemical analyses of a variety of materials brought to the lab by curators and conservators. These projects employ a wide array of advanced instruments for identification and characterization of unknown materials. Many of these projects use multiple techniques performed by a number of different staff members in collaboration to render a final

report on the findings to the requestor. Results provided by staff analysts inform treatment and housing decisions. Highlights in fiscal 2005 included analysis of written adulterations on an original manuscript by Andrew Jackson for his inaugural address; analysis of cross sections of ground, pigments, and coatings on Islamic lacquer book-bindings; analysis of pigments and varnish on a 1910 gouache painting for the cover of the New Yorker by Rae Irvin; analysis of cellulose acetate residues removed during treatment of two documents by George Mason; and analysis of a substance used to impregnate the cover and pages of the Arkieratikon, a Greek book of liturgy from the Medieval and renaissance collection.

Safety Assurance Program. Analyses are also conducted to determine safety or health hazards imposed by handling objects with suspect materials. In fiscal 2005 staff identified as harmless substances found on plastic film cans in the cold vaults in Landover, a Balinese palm leaf book from the Asian Division, and three books in AMED that are being scanned for the Islam and Science Project. These analyses constitute 173 spectra collected by Fourier Transform Infra-red Spectrophotometry, 32 spectra collected by Scanning Electron Microscopy-Energy Dispersive X-Ray, and 118 examinations and digital images using Polarized Light Microscopy.

Digital Media Composition and Aging Research Program. The Digital Media Research Project continued to focus on several projects to assess the usable lifetimes of optical digital media, using natural and accelerated aging. The CD-Audio Media Natural Aging Project monitors the aging properties, in terms of error levels, of digital media in permanent storage under ambient conditions at the Library. The project has now been in progress for nine years. This study is based on a limited sample of 125 titles selected randomly from the Library's collection, and analyzed every three years for increases in errors, which represent the overall stability of the digital data on the disc. A report on the progress of this study at the six-year mark was published in late 2004 by the Canadian Conservation Institute in their post-prints of the symposium on Preservation of Electronic Records: New Knowledge and Decision-Making, and is also available on the Library Preservation Directorate's Web page. The CD Natural Aging Study's original data was collected using a CD-Cats tester on an earlier operating system. In fiscal 2005 a study was conducted to compare the results from the CD-Cats to the Datarius analyzers in order to move all subsequent tests to the Datarius instrument. All 125 titles were tested during the same time period in both testers, and analysis of the data is underway. Based on the results of this initial natural aging study a second expanded study of discs from the collection was initiated in fiscal 2005. This study incorporates 1050 discs selected to represent each year that discs have been produced from the beginning of their emergence on the consumer market, of which 431 were analyzed in fiscal 2005. Discs from both natural aging studies are being examined microscopically and imaged using a Zeiss Stemi SV-II to examine physical manifestations of degradation. The chemical composition of the discs is also being analyzed to relate the presence of certain materials with different mechanisms of degradation.

The CD-Audio Media Accelerated Aging Project utilizes accelerated aging over a range of temperature and relative humidity levels to observe the chemical and physical effects of aging, as well as the effect of laser-engraving discs in an effort to secure the collection. The first phase of this study, which employed standard ANSI aging conditions, was completed last year, resulting in two reports published in fiscal 2005 as part of the Preservation Research and Testing Series. The discs from this accelerated aging study are also being imaged and analyzed to determine the components of CD-Rom discs that cause them to fail earlier than discs with a more extended projected longevity.

The objectives of the Digital Media Research Program are to develop a method for forecasting the obsolescence of optical media, assign life expectancy (LE) ratings for various optical media, establish optimum storage conditions for optical media, and develop a pilot project to integrate best practices into the Library workflow. In furtherance of these goals, and in support of the development of preservation strategies through collaborations, the Preservation Directorate and the Information Technology Division of NIST have entered into an interagency agreement to share data and mutually support initiatives in progress at both the institutions in support of evaluation and extension of life of digital optical media. The NIST research is using accelerated testing to determine the longevity of recordable optical media for storing data for extended periods of time. The results of this research will be used to guide consumers and institutions in purchasing discs that have the components that will protect important data from being corrupted or lost over time, and recommended schedules for refreshing the data.

Paper Aging Research Program. Staff continue to participate in a 100-year Natural Aging of Papers Project. Sponsored by the American Society for Testing and Materials, this work is in collaboration with four other laboratories and 10 libraries across the US and Canada, including the National Archives and

Records Administration, IPI, FPL, and CCI. During fiscal 2005 testing continued on previously received samples. The next batch of material for analysis will arrive during the summer of 2008. The parallel Accelerated Aging of Papers Project has resulted in the potential for a new standard test that would be appreciably faster (requiring only 3 rather than 30 days) and not require expensive humid aging chambers. An additional milestone was reached in fiscal 2005, with the discovery that the production of degradation products do not appear to taper off with time, but rather continue to form for the life of the material.

Adhesives Performance Standards and Research Project. Staff continued to provide leadership in developing international standards and specifications for use in the testing and evaluation of materials used in the housing, stabilization, and treatment of items in the Library collections. In fiscal 2005 staff participated in meetings of ASTM Committee D14 Adhesives, and chaired sub-committee D14.50 Hot Melt, Pressure-Sensitive, and Archive Adhesives. Revisions were made to two standards, ASTM D3191 and D6462 and submitted for Summer 2005 ballot. As chair of the D14.50 task group, staff directed work on the development of two new standard specifications for pressure-sensitive adhesive labels for file folders and box-board, and a new standard test method for peel adhesion of label stocks for use in libraries and archives. In this work staff collaborated with scientists from National Archives and Records Administration, Yale University, New York University, Forest Products Laboratories, and technical representatives of adhesive manufacturers, namely, 3M Company, Flexcon, Data2, Avery, Gaylord, Computype, and Watson Label Products, in order to codify requirements and test methods for permanent archival-quality label stock.

Preservation Reformatting Division

The Preservation Reformatting Division provides access to at-risk materials by converting items to new preservation formats, such as microfilm, preservation facsimile copies or digital reproductions. In carrying out this responsibility, the Division plans and manages the preservation reformatting budget; executes annual reformatting plans by establishing requirements and standards for preservation reformatting; and collaborates with other institutions to develop preservation reformatting projects that improve the quality, content and accessibility of reformatted works. In fiscal 2005, the Preservation Reformatting Division successfully converted 4,664,992 units (e.g. pages, photographs, posters), a 13 percent increase over the fiscal 2004 level, of library material through a combination of preservation microfilming (4,622,631 pages or 2,658,510 exposures), preservation facsimile (16,669 pages or 32 volumes), digitization (40,826 pages or 4,197 works), and other preservation photographic reproductions (4,531 images and 1,000 acetate microfilm reels) for service to the public. The reformatted material was drawn from three Area Studies divisions, seven Public Service Collections divisions, the Law Library, and the master negative microform collection. Approximately 1,874 micrographic units (e.g. microfilm reels, microfiche) received complete bibliographic inspection while all other units received a more basic level of review. Regular quality assurance feedback was provided to all reformatting vendors in order to correct any identified deficiencies and to ensure compliance with contract requirements.

Micrographic and Facsimile Program. An existing four-year preservation microfilming contract was successfully completed. A new multi-year preservation microfilming and digital imaging contract was successfully competed and awarded to OCLC Preservation Service Centers at the close of the fiscal year. This contract will allow the Library to continue high-volume preservation reformatting activities for a wider variety of library materials at a very effective cost. Deliverables under this new contract include microfilm, microfiche and master digital files and derivative files. Master negative microfilm holding records were created for all of the Library's newspapers published in Latin America. These holdings records were then successfully exported to the Center for Research Libraries in support of the National Endowment for the Humanities funded International Coalition on Newspapers (ICON) Unionist.

U.S. Newspaper Program

Over the past twenty-two years, access to American newspapers has been greatly enhanced through the efforts of the United State Newspaper Program (USNP) to catalog and preserve on microfilm an approximately 67.5 million historical newspaper pages. In fiscal 2005, the Library continued to provide technical support to USNP grant recipients under an interagency agreement with the National Endowment for the Humanities. The National Endowment for the Humanities (NEH) announced U.S. Newspaper Program awards of \$1.4 million in fiscal 2005 to fund continuing projects in three states: California (University of California, Riverside), Illinois (University of Illinois, Urbana), and Virginia (Library of Virginia, Richmond). Other projects continue in Illinois (Chicago Historical Society, Chicago), New York (New York State Library, Albany), Pennsylvania (Pennsylvania State University), and Tennessee (University of Tennessee, Knoxville). To date, NEH has provided over 52 million in support of USNP

projects in each of the fifty states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Library staff also worked with OCLC and other USNP participants to best process existing local data records to better conform to the MARC21 holdings standard for OCLC's Unionlist conversion effort.

National Digital Newspaper Program

In fiscal 2005, the National Digital Newspaper Program (NDNP) entered the formative stages of Phase 1 development. NDNP, a partnership between the National Endowment of the Humanities (NEH) and the Library, is a long-term effort to develop an Internet-based, searchable database for all U.S. newspapers and select digitized historic titles. During the year, program and technical development moved significantly forward in parallel. Establishing a distributed resource approach modeled after the United States Newspaper Program (USNP), NEH and the Library devised technical guidelines and requirements for state participation in an award program to digitally convert select historical newspapers from microfilm. In April 2005, NEH awarded 6 state institutions a combined \$1.9 million to locally select and convert 750,000 historical newspaper pages from microfilm for Phase 1. As an initial test dataset, the Library awarded IArchives a contract to convert approximately 80,000 pages from microfilm from its own historical collections fitting the pilot time period, 1900-1910, selecting from those published in Washington, D.C. Currently, the Library has converted 3600 pages (14,400 digital files) to NDNP technical specifications. The Library anticipates making additional conversion awards during the development period. The Library joined the Internet2 community, utilizing its advanced infrastructure for wide-scale digital preservation projects, such as NDNP. In addition, the program is testing the practical considerations of aggregating such a large digital collection, implementing new automated validation and authentication processes to manage assets created a distributed multi-producer model. In addition to NDNP's focus on developing a sustainable model for preservation and access to these digital assets, another program requirement is the deposit of the microfilm print master negative used for digitization to the Library of Congress (approximately 700 reels in the first phase). These reels will be added to the Library's master negative collections, disaster insurance against any possible data loss for the future, and an additional effort to secure long-term access to this national resource. During the early part of fiscal 2005, the NDNP team defined requirements for use of historical newspaper content. A master dataset, a comprehensive newspaper title directory - approximately 140,000 bibliographic records and 900,000 holdings records for newspaper originals, microfilm masters, and copies created during USNP - serves as a basic descriptive structure for all digitized pages. The repository's Web interface allows for searching and browsing these descriptive records and, per the user requirements, will include full-text access and visual navigation to digitized pages as well. Shortly, NDNP will initiate usability testing to inform additional interface development, resulting in a user-friendly application prototype to be publicly released at the end of fiscal 2006.

Mass Deacidification Program

To extend the life and utility of collections through appropriate treatment and technologies, the Directorate deacidified 296,119 books and 1,012,500 document sheets as part of its 30-year initiative to stabilize over 8.5 million general collection books and at least 30,000,000 pages of manuscripts. Deacidification results in extending the useful life of acidic and slightly brittle books by a minimum of 300 percent, assuring in most cases that, given proper handling and storage, treated books will survive for 300-1000 years rather than becoming extremely brittle and degraded in less than a century, requiring much more expensive reformatting. The single-sheet treater enabled the Library to deacidify in the past year 1,012,500 pages of non-book, paper-based materials. The 296,119 bound volumes deacidified last year included 289,405 monograph books (retrospective collections as well as newly-acquired books in various classes that are printed on acidic paper) and 6,714 volumes from the Library's extensive collection of American comic books.

TECHNOLOGY POLICY DIRECTORATE

Integrated Library System Program Office

Integrated Library Management System. In November 2005, the Library upgraded its integrated library management system to the Voyager with Unicode Release. This upgrade accomplished the conversion of the LC Database to Unicode, a character coding system designed to support the interchange and display of the written texts of the diverse languages of the modern world. Users can now search and display Arabic, Chinese, Hebrew, Japanese, Korean, Persian, and Yiddish characters and scripts in the Library of Congress Online Catalog.

During the upgrade, the Library reduced the number of simultaneous external OPAC and Z39.50 sessions in order to allocate additional system resources for processing the conversion and indexing of the database. Shortly after the completion of the upgrade the Library resumed all previous levels of access. The Library regrets any inconvenience to users and appreciates their patience during this brief period.

The Library has provided extensive Help Files to guide users in adjusting the settings in their operating systems and Web browser to enable proper display of all characters in the LC Online Catalog. These Help Files are available at: <http://catalog.loc.gov/help/unicode.htm>, and contain information about fonts for display and printing records. A presentation on the Library's implementation of Unicode is available at: www.loc.gov/ils

Over the past twelve months, the Library has continued to expand access and improve service for users of the Library of Congress Online Catalog (catalog.loc.gov). In the past year the Library increased the number of simultaneous OPAC sessions by 25 percent and saw a resulting decline in the number of customers who could not be accommodated. The Library will continue to monitor external use and seek ways to increase access for users.

In 2005, the Library expanded use of its integrated library management system to its six overseas offices. Staff in Cairo, Islamabad, Jakarta, Nairobi, New Delhi, and Rio de Janeiro now perform cataloging and acquisitions activities in the LC ILS. The Cataloging Distribution Service successfully migrated to a Voyager database in December 2005.

Find It!, LC's OpenURL Resolver. As part of the Library's ongoing efforts to improve service to its users, the Library implemented Find It!, an OpenURL resolver. Using the SFX software from Ex Libris, Inc., Find It! enables users to navigate seamlessly between independently managed resources by generating links from citations for resources to full digital content and other services, such as tables of contents and abstracts; the Library of Congress Online Catalog; the Library's title lists of available electronic journals; and Web search engines.

Electronic Rights Management System. In 2006 the Library will implement a Web interface to its Electronic Rights Management System (ERMS) to improve user access to electronic resources. The ERMS Web interface will deliver a consolidated A to Z listing and up-to-date holdings information. A search engine will provide access to these electronic resources for staff and users. This Web interface will provide a gateway to the full text of articles from e-resources via multiple search options. Future directions for the project include exploring the integration of the ERMS with other production systems, such as Find It!, LC's OpenURL Resolver, to serve as a target for a listing of LC's e-journal holdings.

Encoded Archival Description. LC's seven special format divisions created over 25 new EAD finding aids in 2005. The 291 finding aids indexed in LC's EAD InQuery search system provide access to more than 16 million archival items in LC's collections. The LC ILS contains collection level summary records that point to these EAD finding aids through persistent identifiers (handles). RLG regularly harvests LC's EAD finding aids for inclusion in their Archival Resources site, a "union catalog" of finding aids. In addition, the new PDF manifestations of LC's EAD finding aids are prominently indexed by search engines such as Google and Yahoo, which provides increased visibility to LC's archival collections.

In fiscal 2005, LC's EAD Technical Group completed LC's implementation of EAD2002, the revised EAD XML DTD released by the Society of American Archivists into production in January 2004. Using a conversion software toolkit written by LC's Music Division staff, all existing LC finding aids were converted to XML. PDF versions were also creating (using XSL-FO) to provide printable documents for LC reading rooms. With ITS assistance, ILS staff modified LC's EAD InQuery search system.

Handle Server. The Library uses CNRI's handle server software to provide persistent identification of LC-managed electronic resources. In 2005, LC migrated its handle server application to an Oracle platform and Library staff registered more than 750,000 new handles. The Library's handle server now contains over 1.25 million handles.

Network Development and MARC Standards Office (NDMSO)

METS (www.loc.gov/mets) and Digital Library Standards Prototyping. This year NDMSO expects to continue to expand our tools to allow MODS and METS validation at creation, increasing data integrity, and explore moving into a Fedora repository.

MARC 21 (<www.loc.gov/marc>) and MARCXML (<www.loc.gov/marcxml>) *MARC 21 Documentation.* In the past, NDMSO maintained the *Concise Formats* document in a standard ISO SGML markup to generate 5 different products or views for users, including the *MARC 21 Concise Formats* (print), the

MARC 21 Concise Formats (html/web), the *MARC 21 LITE Bibliographic Format* (html/web), the MARC 21 field lists (ASCII/web), and the translator's version (html/web). NDMSO is completing conversion of all five MARC 21 formats into XML to enable migration from the SGML markup to a content-oriented XML tag set. The conversion process is expected to be completed during the beginning of FY06.

Unicode-MARC Forum. The Library of Congress has set up a special listserv for the MARC 21 systems and vendor communities to discuss and arrive at consensus on various issues concerning the implementation of Unicode with MARC 21. Proposal 2006-04 (www.loc.gov/marc/marbi/2006/2006-04.html) was written which summarizes the discussion on the Unicode-MARC Forum for converting Unicode to MARC-8 for systems that cannot handle Unicode records. The Forum consensus was for defining a placeholder character that was to be substituted for each unmappable Unicode character.

MODS (<www.loc.gov/mods>) and *MADS* (<www.loc.gov/mads>). NDMSO revised the MODS XML Schema, which was issued as version 3.1 in July 2005. It incorporated some structural changes to enable use of MODS defined elements in the Metadata Authority Description Schema (MADS— a derivative of MARC 21 Authority format in XML), some corrections, and some additions/changes requested by users. Some enhancements were intended to accommodate the emerging description standard *Cataloging Cultural Objects*.

The office is updating the XSLT stylesheets that it maintains for conversion between MARCXML and other XML formats based on continually revised mappings.

An increasing number of institutions are implementing MODS in their digital library projects as a descriptive metadata schema, particularly in conjunction with METS. For instance, the Digital Library Federation's Aquifer initiative is creating a testbed of tools for selecting, collecting, and providing access to quality digital content and is using MODS with a MODS profile developed for Aquifer (<<http://www.diglib.org/aquifer>>). DSpace has also chosen MODS as the preferred descriptive metadata format in their METS profile for submission information packages.

The Metadata Authority Description Schema (MADS) was updated in late June 2005 to allow for the reuse of MODS elements. The office issued a conversion tool in Dec. 2005 in the form of an XSLT stylesheet to convert from MARC 21 authority records to MADS.

PREMIS. The Preservation Metadata: Implementation Strategies Working Group (PREMIS), sponsored by OCLC and RLG and co-chaired by staff from LC/NDMSO and the Florida Center for Library Automation with 30 members from five countries, completed its final report and data dictionary for preservation metadata in May 2005. LC/NDMSO established a Website for the maintenance activity (www.loc.gov/premis), including maintenance of the data dictionary and the XML schemas to support implementation. It also established a discussion list for the PREMIS Implementors' Group (<pig@loc.gov>), an email address for questions (<premis@loc.gov>) and is making available documentation in support of this activity. An implementors' registry is under development.

In November 2005 the PREMIS Working Group received the prestigious Digital Preservation Award, which is sponsored by the UK's Digital Preservation Coalition and is part of the Conservation Awards supported by Sir Paul McCartney, at the British Museum in London.

OFFICE OF STRATEGIC INITIATIVES

The major focus for the service unit was the National Digital Information Infrastructure and Preservation Program, a congressionally mandated program that the Library is leading for the nation. The program seeks to collect and preserve at-risk digital information in a collaborative framework of partners with defined roles and responsibilities. Because the preservation of digital materials can sometimes run into challenges posed by copyright law, a new independent group was formed in fiscal 2005 to recommend ways that copyright law should be changed to meet the needs of libraries when working with digital materials for preservation as well as other purposes.

OSI is also responsible for the management of the Library's myriad Websites and for the educational outreach programs, which demonstrate to educators nationwide the value of incorporating electronic primary sources in the classroom.

The Information Technology Services Directorate is also part of OSI, providing technology support to all the service units of the Library.

National Digital Information Infrastructure and Preservation Program

The National Digital Information Infrastructure and Preservation Program (NDIIPP) continued to move forward with its collaborative partnerships and other activities designed to bring focus to important issues, such as the ingest of large archives of digital material, how current copyright law affects the process of digital preservation, the establishment of the first digital-preservation research grants program and an examination of how the states and territories of the United States are coping with the preservation of digital state records. The program's Website is at <www.digitalpreservation.gov>.

Digital Preservation Partnerships. The initial NDIIPP Digital Preservation Partnerships form a model institutional network focused on preserving at-risk digital information. This work depends on extensive collaboration among the partners and with the Library. The eight consortia comprising 36 institutions, which received NDIIPP awards totaling nearly \$14 million during fiscal 2004, met twice in Washington during fiscal 2005. All the partners have shown considerable progress during the initial year of their projects, particularly in establishing practical working frameworks and developing digital preservation tools and services.

Archive Ingest and Handling Test. In June 2004, the Library entered into a joint digital preservation project with Old Dominion University, Department of Computer Science; Johns Hopkins University, Sheridan Libraries; Stanford University Libraries & Academic Information Resources; and Harvard University Library to explore strategies for the ingest and preservation of digital archives. The 12-month project was supported by Information Systems Support, Inc., and was completed in June 2005. The test was designed to identify, document and disseminate working methods for preserving the nation's increasingly important digital cultural materials, as well as to identify areas that may require further research or development.

The AIHT participants investigated and applied various digital preservation strategies, using a digital archives donated to the Library by the Center for History and New Media at George Mason University. The archives is a collection of 57,000 digital images, text, audio and video related to the Sept. 11, 2001 events. The transfer of these 12 gigabytes of digital content was being used to emulate the problems that arise in digital preservation and to test possible solutions.

The project produced a first generation of tools and processes for institutions to obtain sufficient physical control over digital objects to preserve them; validated with practical experience the need for implementation guidelines for the use of the METS standard (the METS schema is a standard for encoding descriptive, administrative and structural metadata regarding objects within a digital library, expressed using the XML schema language of the World Wide Web Consortium); stress-tested six repository implementations and provided useful feedback to the developers of those implementations and validated the transfer of data as the point of standardization rather than specific hardware and software implementations. A final report will be available in fiscal 2006.

Library of Congress-National Science Foundation Research Awards. In May 2005, 10 university teams received a total of \$3 million to undertake pioneering research to support the long-term management of digital information. The Library and the National Science Foundation made the awards as the result of a partnership formed to develop the first digital-preservation research grants program. Research supported by these awards will help produce the technological breakthroughs needed to keep very large bodies of digital content securely preserved and accessible over many years.

The projects are exploring challenging topics, such as preserving rich oceanographic data from hundreds of deep-sea submersible missions; automating methods to describe digital objects and place them in secure archival storage; testing how to preserve digital video when it is first created; and preserving complex three-dimensional digital content. All the projects are expected to produce study results in one year.

Electronic Deposit for Electronic Journals Project. The purpose of the eDeposit for eJournals project is to

build a prototype system by the end of fiscal 2006 that will ingest, archive and create access to electronic journals and other digital content in the Library collections. The project is a collaborative effort among three service units of the Library: the U.S. Copyright Office, Library Services and the Office of Strategic Initiatives. The project will consider the near- and long-term needs of library users, as well as the technologies available, by studying other systems and technologies in order to build the most efficient system using available resources

Web Content Capture Project. During its second year, the Web Capture Team worked to establish broader institutional support for, and participation in, capturing at-risk content from the Web. The team established a regular stream of content identification and selection to harvest the content within a reliable technical environment. The team also worked with custodians of the materials Library-wide to archive the content.

In collaboration with representatives from the Congressional Research Service, the Law Library and Library Services, the Web Capture Team worked with recommending officers and curators to expand the Library's collection of Web content by 15 terabytes of data comprising more than 3,500 Websites. To date, the Library has captured a total of 34 terabytes of Web content. The Web materials relate to such events as the national elections of 2004 and the papal transition from John Paul II to Benedict XVI. The Library also continued to capture Websites associated with the war in Iraq, recent Supreme Court nominations, and Hurricane Katrina.

The Library is a member of the International Internet Preservation Consortium and worked through that organization to develop common Web capture tools, processes and practices.

National Digital Library Program

The National Digital Library Program continues to be one of the premier Websites of the federal government, with millions of users across the country and around the world. During fiscal 2005, the main home page at www.loc.gov was redesigned with an enhanced interface and site architecture. The new design offers more attractive graphics and is easier to navigate than its predecessor. The American Memory Website, its companion Today in History site, and numerous other Library Websites also received this visual and architectural upgrade. The Library's site received an "Outstanding Website" award from the Web Marketing Association in September.